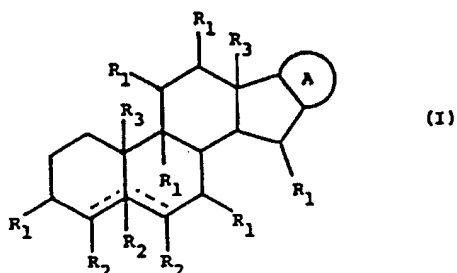


Th Claims Defining the Invention are as Follows

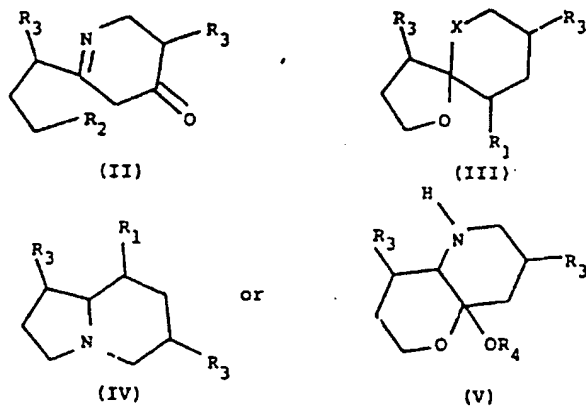
1. A composition comprising at least two glycoalkaloids of formula I:



5

wherein: either one or both of the dotted lines represents a double bond, and the other a single bond, or both represent single bonds;

A: represents a radical selected from the following radicals of general formulae (II) to (V):



10

each of R^1 is a radical separately selected from the group consisting of hydrogen, amino, oxo and OR^4 ;

each of R^2 is a radical separately selected from the group consisting of hydrogen, amino and OR^4 ;

each of R^3 is a radical separately selected from the group consisting of hydrogen, carbohydrate and a carbohydrate derivative;

"X" is a radical selected from the group comprising $-CH_2-$, $-O-$ and $-NH_2-$; and

- 5 wherein the compound includes at least one R^4 group that is a carbohydrate or a derivative thereof selected from the group comprising glyceric aldehyde, glycerose, erythrose, threose, ribose, arabinose, xylose, lyxose, altrose, allose, gulose, mannose, glucose, idose, galactose, talose, rhamnose, dihydroxyactone, erythrulose, ribulose, xylulose, psicose,
10 fructose, sorbose, tagatose, and other hexoses, heptoses, octoses, nanoses, decoses, deoxysugars with branched chains, (e.g. apiose, hamamelose, streptose, cordycepose, mycarose and cladinose), compounds wherein the aldehyde, ketone or hydroxyl groups have been substituted (e.g. N-acetyl, acetyl, methyl, replacement of CH_2OH), sugar
15 alcohols, sugar acids, benzimidazoles, the enol salts of the carbohydrates, saccharinic acids, sugar phosphates;

wherein the ratio of said glycoalkaloids is between 6:1 and 1:6 and on the proviso that when the glycoalkaloids are solamargine and solasonine and they are present in a 1:1 ratio the solamargine and solasonine are isolated.

- 20 2. A composition according to claim 1 comprising two glycoalkaloids in a ratio selected from the group of ratios consisting of approximately: 1:6 - 1:0.5; 1:5; 1:4; 1:3; 1:2, 1:1.5 and 1:1.
3. A composition according to claim 1 wherein the glycoalkaloids are triglycoside glycoalkaloids or solasodine glycosides.
- 25 4. A composition according to claim 1 wherein the glycoalkaloids are selected from the group consisting of: solamargine, solasonine, solanine, tomatine, solanocapsine and 26-aminofurostane.

5. A composition comprising about a 1:1 ratio of solamargine and solasonine in isolated form.

6. A composition comprising at least two glycoalkaloids of formula I wherein:

5 either one or both of the dotted lines represents a double bond, and the other a single bond, or both represent single bonds;

A: represents a radical selected from the following radicals of general formulae (II) to (V);

10 each of R^1 is a radical separately selected from the group consisting of hydrogen, amino, oxo and OR^4 ; each of R^2 is a radical separately selected from the group consisting of hydrogen, amino and OR^4 ; each of R^3 is a radical separately selected from the group consisting of hydrogen, carbohydrate and a carbohydrate derivative; "X" is a radical selected from the group comprising $-CH_2-$, $-O-$ and $-NH_2-$; and

15 wherein the compound includes at least one R^4 group that is a carbohydrate or a derivative thereof selected from the group comprising glyceric aldehyde, glycerose, erythrose, threose, ribose, arabinose, xylose, lyxose, altrose, allose, gulose, mannose, glucose, idose, galactose, talose, rhamnose, dihydroxyactone, erythrulose, ribulose, xylulose, psicose, fructose, sorbose, tagatose, and other hexoses, heptoses, octoses,
20 nanoses, decoses, deoxysugars with branched chains, (e.g. apiose, hamamelose, streptose, cordycepose, mycarose and cladinose), compounds wherein the aldehyde, ketone or hydroxyl groups have been substituted (e.g. N-acetyl, acetyl, methyl, replacement of CH_2OH), sugar alcohols, sugar acids, benzimidazoles, the enol salts of the carbohydrates,
25 saccharinic acids, sugar phosphates; and

on the proviso that when the glycoalkaloids are solasonine and solamargine they do not constitute 66% of glycosides in the composition.

7. A composition according to claim 6 wherein the glycoalkaloids are triglycoside alkaloids and constitute at least 70%-90% of the glycosides in the composition.
8. A composition according to claim 6, wherein the glycoalkaloids are triglycoside alkaloids and constitute at least 91-95% of the glycosides in the composition.
- 5 9. A composition according to claim 6, wherein the glycoalkaloids are triglycoside alkaloids and constitute at least 96-100% of the glycosides in the composition.
10. A composition according to claim 6 comprising two glycoalkaloids in a ratio selected from the group of ratios consisting of: 1:5; 1:4; 1:3; 1:2 and 1:1.
11. A composition according to claim 6 wherein the glycoalkaloids are selected
10 from the group of glycoalkaloids consisting of: solamargine, solasonine, solanine, tomatine, solanocapsine and 26-aminofurostane.
12. A composition comprising solamargine and solasonine in a ratio between about 1:6 and 6:1 on the proviso that the solasonine and solamargine do not constitute 66% of the glycosides in the composition.
- 15 13. A composition comprising solamargine and solasonine in a ratio between about 1:4 and 4:1 on the proviso that the solasonine and solamargine do not constitute 66% of the glycosides in the composition.
14. A composition comprising solamargine and solasonine in a ratio between about 1:3 and 3:1 on the proviso that the solasonine and solamargine do not
20 constitute 66% of the glycosides in the composition.
15. A composition comprising solamargine and solasonine in a ratio between about 1:2 and 2:1 on the proviso that the solasonine and solamargine do not constitute 66% of the glycosides in the composition.
16. A composition comprising a 1:1 ratio of solamargine and solasonine on the
25 proviso that the solasonine and solamargine do not constitute 66% of the glycosides in the composition.

17. A composition consisting essentially of at least two glycoalkaloids of formula I wherein:

either one or both of the dotted lines represents a double bond, and the other a single bond, or both represent single bonds;

- 5 A: represents a radical selected from the following radicals of general formulae (II) to (V); each of R^1 is a radical separately selected from the group consisting of hydrogen, amino, oxo and OR^4 ; each of R^2 is a radical separately selected from the group consisting of hydrogen, amino and OR^4 ; each of R^3 is a radical separately selected from the group consisting of
- 10 hydrogen, carbohydrate and a carbohydrate derivative; "X" is a radical selected from the group comprising $-CH_2-$, $-O-$ and $-NH_2-$; and

- wherein the compound includes at least one R^4 group that is a carbohydrate or a derivative thereof selected from the group comprising
- 15 glyceric aldehyde, glycerose, erythrose, threose, ribose, arabinose, xylose, lyxose, altrose, allose, gulose, mannose, glucose, idose, galactose, talose, rhamnose, dihydroxyactone, erythrulose, ribulose, xylulose, psicose, fructose, sorbose, tagatose, and other hexoses, heptoses, octoses, nanoses, decoses, deoxysugars with branched chains, (e.g. apiose, hamamelose, streptose, cordycepose, mycarose and cladinose),
- 20 compounds wherein the aldehyde, ketone or hydroxyl groups have been substituted (e.g. N-acetyl, acetyl, methyl, replacement of CH_2OH), sugar alcohols, sugar acids, benzimidazoles, the enol salts of the carbohydrates, saccharinic acids, sugar phosphates.

18. A composition according to claim 17 wherein the glycoalkaloids are
- 25 triglycoside alkaloids and constitute at least 70%-90% of the glycosides in the composition.

19. A composition according to claim 17 wherein the glycoalkaloids are triglycoside alkaloids and constitute at least 91-95% of the glycosides in the composition.

20. A composition according to claim 17 wherein the glycoalkaloids are triglycoside alkaloids and constitute at least 96-100% of the glycosides in the composition.
21. A composition according to claim 17 wherein the composition consists essentially of two glycoalkaloids in a ratio selected from the group of ratios consisting of: 1:5; 1:4; 1:3; 1:2 and 1:1.
22. A composition according to claim 17 wherein the glycoalkaloids are selected from the group of glycoalkaloids consisting of: solamargine, solasonine, solanine, tomatine, solanocapsine and 26-aminofurostane.
23. A composition consisting essentially of solamargine and solasonine in a ratio between about 1:6 and 6:1, 1:4 and 4:1, 1:3 and 3:1 or 1:2 to 2:1.
24. A composition consisting essentially of about a 1:1 ratio of solamargine and solasonine.
25. A composition according to claim 1, 6 or 17 comprising about 0.001% - 5% glycoalkaloids.
26. A composition according to claim 1, 6 or 17 comprising about 10% glycoalkaloids.
27. A pharmaceutical composition comprising a composition of claim 1, 6 or 17 and a pharmaceutically acceptable carrier.
28. A pharmaceutical composition according to claim 27 adapted for topical delivery.
29. A pharmaceutical composition according to claim 27 adapted for oral delivery.
30. A pharmaceutical composition according to claim 27 adapted for parenteral delivery.

31. A method of treating cancer in a subject comprising the step of administering to the subject an effective amount of a composition of claim 1, 6 or 17 or a pharmaceutical composition of claim 27.
- 5 32. A method of treating psoriasis in a subject comprising the step of administering to the subject an effective amount of a composition of claim 1, 6 or 17 or pharmaceutical composition of claim 27.
33. A method of treating or abnormal cell growth in a patient comprising the step of administering an effective amount of a composition of claim 1, 6 or 17 or pharmaceutical composition of claim 27 to the patient.
- 10 34. A method of diagnosing abnormal cell growth in a subject comprising the step of applying a composition of claim 1, 6 or 17 or pharmaceutical composition of claim 27 to a test area on said subject and then monitoring said test area for inflammation.
- 15 35. A method according to claim 34 wherein the diagnostic is for skin cancers such as keratoses, basal cell carcinomas, squamous cell carcinomas and melanomas.
36. A composition of claim 1, 6 or 17 further comprising a detectable label.
- 20 37. Use of a composition according to claim 36 for detecting a target cell comprising the steps of applying the composition to a sample or a subject and detecting the label.